

ISSUE 4; January 2025

Description

- Standard 2.5 x 2.0mm oscillator in a ceramic package with a hermetically sealed metal lid

Frequency Parameters

- Frequency: 1.0MHz to 156.25MHz
- Frequency Stability: $\pm 50.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ per year

Electrical Parameters

- Supply Voltage: $1.8\text{V} \pm 10\%$

Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Start Up Time:
0.9ms typ to 90% of final amplitude (under ideal conditions @25°C)
10ms max
- Output Voltage Levels:
Output Low (VoL): 10% Vs max
Output High (VoH): 90% Vs min

Output Control

- Enable/Disable:
Logic '1' ($\geq 70\%$ Vs) to pad 1 enables oscillator output.
Logic '0' ($\leq 30\%$ Vs) to pad 1 disables oscillator output. When disabled the oscillator output goes to the high impedance state.
No connection to pad 1 enables oscillator output.
- Standby Current:
0.5 μA typ @25°C
10 μA max

Noise Parameters

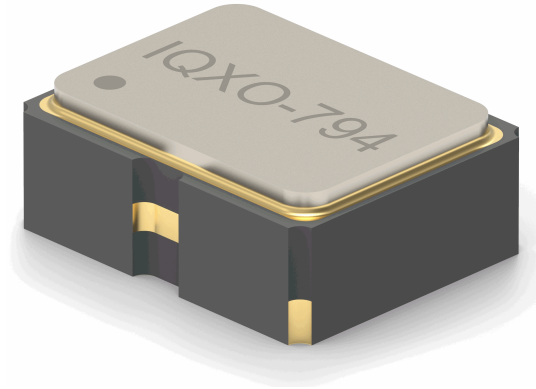
- Period Jitter (pk-pk): $\pm 80\text{ps}$ typ
- Period Jitter (1 σ): $\pm 10\text{ps}$ typ
- RMS Phase Jitter (12kHz to 20MHz): 1ps max

Environmental Parameters

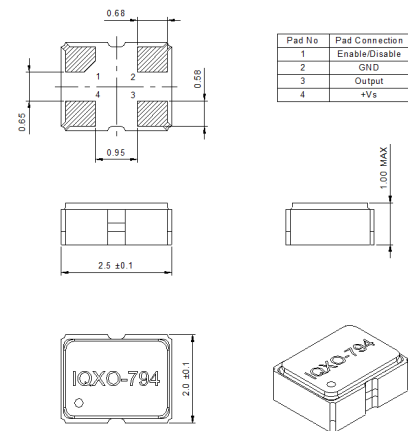
- Storage Temperature Range: -55 to 125°C
- Shock: Half Sine shock pulse with peak acceleration 500g; Pulse duration: 0.3ms
- Vibration: MIL-STD-202 Method 204. 5g for 20 minutes, 12 cycles in each of the 3 orientations, 10 ~ 2000 Hz. As per Table 11 of AEC-Q200.

Manufacturing Details

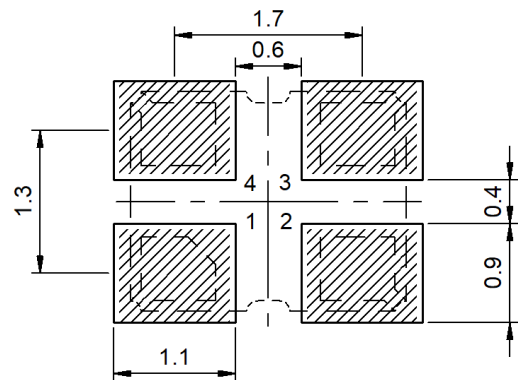
- RoHS Terminations: NiAu
- RoHS Reflow: 260°C max for 10 seconds max



Outline (mm)



Recommended Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example:
- 20.0MHz IQXO-794
- HCMOS ± 50 ppm -20 to 70C 1.8V

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Tape & reel in accordance with EIA-481
- Quantities below the standard reel size to be supplied on cut tape.
- Standard Pack Quantity: 3,000

Electrical Specification - maximum limiting values 1.8V $\pm 10\%$

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	16.999999MHz	-20 to 70	± 50.0	10	7	40/60
		-40 to 85	± 50.0	10	7	40/60
17.0MHz	156.25MHz	-20 to 70	± 50.0	12	7	40/60
		-40 to 85	± 50.0	12	7	40/60

This document was correct at the time of printing; please contact your local sales office for the latest version.

[Click to view latest version on our website.](#)

Sales Office Contact Details:

UK: +44 (0)1460 270200

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com